

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee: Newmont Mining Corporation
427 Ridge Street, Suite C
Reno, Nevada 89501

Permit No.: NEV2000507

Location: Lone Tree Mine
5 miles west of Valmy, Humboldt County, Nevada
Township 34N, Range 42E, Sections 16 and 17 MDB&M
Latitude 40° 49' 8" N, Longitude 117° 16' 0" W

Flow: 25.9 million gallons per day (MGD)
(Planned to be increased to 64.8 MGD)

General Description:

Dewatering wells are used at the applicant's Lone Tree Mine to depress local groundwater elevations as required to facilitate mining. Infiltration will minimize groundwater losses from the hydrographic basin and may eventually allow the applicant to stop discharging to the Humboldt River. The water to be discharged to the five Rapid Infiltration Basins (RIBs) will meet the Division's water quality standards of Nevada Administrative Code (NAC) 445A.144 or the background alluvial aquifer water quality at the basins. No water treatment is proposed for the first phase of this project, however, an arsenic treatment plant is operated at the site for other water sources.

The RIBs will range from 250 feet to 650 feet long, 150 feet to 350 feet wide and 15 feet to 30 feet deep. The RIBs will be excavated with no constructed embankments. This project will include one 24-inch HDPE delivery line with an 18-inch HDPE distribution line to each RIB.

The applicant has successfully operated an RIB in Section 16, T.34N, R.42E, as authorized by a temporary permit issued by the Bureau of Mining Regulation and Reclamation. The long term use of the test RIB is included in this permit.

Description of Discharge:

The mine dewatering water will be discharged into one of five RIBs. The aquifer response will determine the actual discharge rates and the rotational schedule. Based on water quality analyses provided in the permit application, the water from dewatering wells WW-22 and WW-23 meets all primary drinking water standards. However, the water has elevated levels of total dissolved solids, average 628 mg/l; fluoride, average 3.3 mg/l; and manganese, average 0.133 mg/l; which are secondary drinking water standards.

The water from other dewatering wells may be of poorer quality and may require treatment to meet drinking water/discharge standards.

Receiving Water Characteristics:

Based on August 2000 data, the alluvial aquifer in Sections 16 and 17 meets all primary and secondary drinking water standards. The depth to the alluvial groundwater is approximately 250 feet below ground surface (bgs). Bedrock groundwater generally occurs at depths greater than 450 feet bgs and is of generally good quality.

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to the discharge to the groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Humboldt Sun** and the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of U.S. EPA Region IX or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing scheduled by the Administrator must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to Nevada Revised Statute 445A.605.

Proposed Determination

The Division has made the tentative determination to issue the proposed permit. The proposed permit will be for a period of five (5) years.

Schedule of Compliance and Special Conditions

The Permittee shall implement and comply with the provisions of the Schedule of Compliance after approval of the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. An updated O & M Manual shall be submitted to the Division for approval by **December 31, 2000.**
- c. A flow measuring device shall be installed in the 24-inch delivery line upgradient of the first 18-inch distribution line **prior to discharge.**
- d. Maps on 8 ½" X 11" paper showing the location of the RIB, the monitoring wells, the piezometers, the dewatering wells, and the location of the compliance sampling point shall be

submitted within **30 days of the initiation of infiltration.**

- e. If any new dewatering wells that will be discharged to the RIBs are drilled, a new map, on 8 ½" X 11" paper, shall be submitted to the Division **with the next DMR.**

The discharge shall be limited and monitored by the Permittee as specified below:

Table 1: Effluent Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	DAILY MAX	30 DAY AVERAGE	SAMPLE LOCATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	25.9 MGD	---	a	Continuous	Flow meter, recorder
Total Dissolved Solids	1000 mg/l	1000 mg/l	a	Monthly ¹	Discrete
pH	$6.5 \leq \text{pH} \leq 8.5$		a	Monthly ¹	Discrete
Arsenic	0.050 mg/l	0.050 mg/l	a	Monthly ¹	Discrete
Fluoride	4.0 mg/l	4.0 mg/l	a	Monthly ¹	Discrete
Manganese	Monitor and Report		a	Monthly ¹	Discrete
Antimony	0.146 mg/l	0.146 mg/l	a	Monthly ¹	Discrete
Iron	Monitor and Report		a	Monthly ¹	Discrete
Chloride	Monitor and Report		a	Monthly ¹	Discrete
Sulfate	Monitor and Report		a	Monthly ¹	Discrete
Barium	2.0 mg/l	2.0 mg/l	a	Quarterly	Discrete
Beryllium	0.07 µg/l	0.07 µg/l	a	Quarterly	Discrete
Cadmium	0.005 mg/l	0.005 mg/l	a	Quarterly	Discrete
Chromium (total)	0.100 mg/l	0.100 mg/l	a	Quarterly	Discrete
WAD Cyanide	0.200 mg/l	0.200 mg/l	a	Quarterly	Discrete
Lead	0.050 mg/l	0.050 mg/l	a	Quarterly	Discrete
Mercury	0.002 mg/l	0.002 mg/l	a	Quarterly	Discrete
Nickel	0.0134 mg/l	0.0134 mg/l	a	Quarterly	Discrete
Selenium	0.050 mg/l	0.050 mg/l	a	Quarterly	Discrete
Thallium	0.013 mg/l	0.013 mg/l	a	Quarterly	Discrete

Profile I ³	Monitor and Report	a, b ²	Annually ⁴ in the 4th quarter	Discrete
Instantaneous Flow (gpm)	Monitor and Report	b	Monthly	Average
Cumulative Volume (gal.)	Monitor and Report	b	Monthly	Discrete
Depth of Water	Monitor and Report	c	Weekly	Discrete

Footnotes:

1. Weekly for the first month of discharge and for the first month of operation of a dewatering well not previously discharged to the RIBs, monthly at all other times.
2. Appendix A.
3. Results of annual sample analyses shall be submitted with the Discharge Monitoring Report submitted in January each year.

The receiving water shall be monitored by the Permittee as specified below:

Table 2: Groundwater Monitoring

PARAMETER	SAMPLE MAXIMUMS		MONITORING REQUIREMENTS		
	DAILY MAX	30-DAY AVERAGE	SAMPLE LOCATION	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	$6.5 \leq \text{pH} \leq 8.5$		d	Monthly ²	Discrete
Arsenic	0.050 mg/l	0.050 mg/l	d	Monthly ²	Discrete
Antimony	0.146 mg/l	0.146 mg/l	d	Monthly ²	Discrete
Chloride, Fluoride, Iron, Manganese, Sulfate, Total Dissolved Solids	Monitor and Report		d	Monthly ²	Discrete
Static Water Level, in feet	Monitor and Report		d, f	Weekly	Discrete
Static Water Level, in feet	Monitor and Report		e	Monthly	Discrete
Barium	2.0 mg/l	2.0 mg/l	d, e	Quarterly	Discrete
Beryllium	0.07 $\mu\text{g/l}$	0.07 $\mu\text{g/l}$	d, e	Quarterly	Discrete
Cadmium	0.005 mg/l	0.005 mg/l	d, e	Quarterly	Discrete
Chromium (total)	0.100 mg/l	0.005 mg/l	d, e	Quarterly	Discrete
WAD Cyanide	0.200 mg/l	0.200 mg/l	d, e	Quarterly	Discrete
Lead	0.050 mg/l	0.050 mg/l	d, e	Quarterly	Discrete

Mercury	0.002 mg/l	0.002 mg/l	d, e	Quarterly	Discrete
Nickel	0.0134 mg/l	0.0134 mg/l	d, e	Quarterly	Discrete
Selenium	0.050 mg/l	0.050 mg/l	d, e	Quarterly	Discrete
Thallium	0.013 mg/l	0.013 mg/l	d, e	Quarterly	Discrete
Profile I ¹	Monitor and Report for constituents not listed above		d, e	Annually	Discrete

Footnotes:

1. Appendix A

2. To be modified based upon the Division's acceptance of the Permittee's demonstration of system stability as defined in the Lone Tree Infiltration Project Operations and Maintenance Manual.

Rationale for Permit Requirements

Monitoring is required to verify that the discharged water meets the Division's water quality standards of NAC 445A.144 or the background alluvial water quality and to verify that the alluvial aquifer is not being degraded.

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August 2000

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Appendix A

WATER POLLUTION CONTROL PERMIT #NEV 2000507

NDEP Form 01

SAMPLE LOCATION _____

Reporting Period (Year) _____

Description	Standards*				
Name of Certified Lab					
Lab Reference #					
Sample Date					
Lab Test Date					
Sampled by					
pH	6.5 - 8.5				
Total Dissolved Solids	500 - 1000				
Phosphorus	---				
Alkalinity (Total CaCO ₃)	---				
Bicarb (HCO ₃)	---				
Calcium	---				
Magnesium	125 - 150				
Potassium	---				
Sodium	---				
Aluminum	0.05 - 0.2				
Antimony	0.146				
Beryllium	0.004				
Chloride	250 - 400				
Fluoride	2 - 4				
Nickel	0.1				
Nitrate (as total nitrogen)	10				
Sulfate	250 - 500				
Arsenic	0.05				
Barium	2.0				
Cadmium	0.005				
Chromium	0.1				
Copper	1.3				
Iron	0.3 - 0.6				
Lead	0.015				
Manganese	0.05 - 0.10				
Mercury	0.002				
Selenium	0.05				
Silver	0.05				
Thallium	0.002				
Zinc	5.0				
* Standard is for reference purposes only					
Comments:					